



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/816,279

04/01/2004

Jeffrey A. Kline

163P006(B)

9497

23363 7590 02/26/2008
CHRISTIE, PARKER & HALE, LLP
PO BOX 7068
PASADENA, CA 91109-7068

EXAMINER

NASSER, ROBERT L

ART UNIT

PAPER NUMBER

3735

MAIL DATE

DELIVERY MODE

02/26/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/816,279	Applicant(s) KLINE, JEFFREY A.	
	Examiner ROBERT L. NASSER	Art Unit 3735	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 22-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 12-21 is/are rejected.
- 7) ☒ Claim(s) 5-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/4/04</u> . | 6) <input type="checkbox"/> Other: _____ |

Applicant's election of Group I, claims 1-21 in the reply filed on 11/26/2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Accordingly, claims 22-45 are withdrawn from consideration.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3 and 12 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 7104964. Although the conflicting claims are not identical, they are not patentably distinct from each other because the current claims are broader versions of the patented claims, and, as such, are covered by the patented claims. Claim 12 is rejected in that the examiner takes official notice that a laser diode spectrometer is a well known spectrometer.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Rummell et al 3799149. Rummell shows a device with a mouthpiece 15 and a breathing tube connecting the mouthpiece to a flow meter, i.e. inspiration and expiration spirometers, and a mass spectrometer 28 that detects the concentration of oxygen, carbon dioxide, and nitrogen in the tube. Claim 2 is rejected in that there is data processing means connected to both sensors. Claim 3 is rejected in that the system calculates and displays the concentrations. Claim 4 is rejected in that the system calculates and displays the o2/co2 ratio.

Claims 1 and 2 are rejected under 35 U.S.C. 102(n) as being anticipated by Heinonen et al. Heinonen shows a system with a breathing tube having a flow sensor 42 and infrared spectrometer 44 connected thereto, and a data processing means connected to both sensors.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinonen 6139506 in view of Allen 2004/0236244. Heinonen does not state that the spectrometer is a laser diode spectrometer. Allen teaches that a laser diode spectrometer is a known spectrometer for the purposes of Heinonen. Hence, it would have been obvious to modify Heinonen to use a laser diode spectrometer, as it is merely the substitution of one known spectrometer for another. Claims 19 and 20 are rejected in that the device is coupled to a mouthpiece and used with a respirator. Hence, it has the couplings. Claim 21 is rejected in that the flow meter is a differential flow meter.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinonen in view of Allen et al, as applied to claims 12 and 19-21 above, further in view of Roller et al 7192782. Roller et al further teaches that it is known when using an infrared spectrometer, to provide a vacuum pump to draw air into the spectrometer. Hence, it would have been obvious to modify the combination to use such a pump, to enable accurate measurements to take place. The exact flow rate would have been a mere matter of design choice for one skilled in the art.

Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinonen in view of Allen et al, as applied to claims 12 and 19-21 above, further in view of Fraser 3951607. Fraser further shows a pulmonary analyzer like that of Heinonen, where all of NO, CO, O₂, and CO₂ are measured. Hence, it would have been obvious to modify Heinonen to measure all four parameters, to provide a more complete picture

of the patient's condition. In addition, the exact order of measurement and speed of measurement would have been a mere matter of design choice for one skilled in the art.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heinonen in view of Allen et al, as applied to claims 12 and 19-21 above, further in view of Zare et al 6084682. Zare teaches that the spectrometer recited in the claim is a well known spectrometer. Hence, it would have been obvious to modify the combination to use the spectrometer of Zare, as it is merely the substitution of one known spectrometer for another.

Claims 5-11 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5-7 define over the art in that none of the art teaches determining the ratio of NO to CO, as claimed.

Claims 8-10 define over the art in that none of the art teaches determining the O₂/C O₂ ratio and displaying it relative to NO concentration or expired volume, or plotting it with the plot of NO relative to expired volume, as claimed.

Claim 11 defines over the art in that none of the art has the phase alignment, as claimed.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Vail et al 3896792 shows a device with a flow sensors 20 and a spectrometer.

Lemelson 5787885, Bacaner et al 4966141, Paz 5515859, and Daniels et al 6099481 all show similar inventions to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT L. NASSER whose telephone number is (571)272-4731. The examiner can normally be reached on m-f 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor II can be reached on 571 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert L. Nasser Jr/
Primary Examiner
Art Unit 3735

RLN
2/18/2008

Application/Control Number: 10/816,279
Art Unit: 3735

Page 7